

**ADDENDUM NO. 5**

**DELAWARE STATE UNIVERSITY (OWNER)  
OPTICAL SCIENCE CENTER FOR APPLIED RESEARCH  
Contract No. (PC-2013-004A-OSCAR)  
1220 N. DuPont Highway  
Dover, DE 19901**

**THE WHITING-TURNER CONTRACTING COMPANY  
(CONSTRUCTION MANAGER)  
131 Continental Drive, Suite 404  
Newark, DE 19713  
302-292-0676 (phone)  
302-292-0683 (fax)**

**BIDS DUE: DECEMBER 19, 2013 at 11:00 AM (NOTE: REVISED DATE)**

**LOCATION: Delaware State University  
Education and Humanity Building #32, Main Theater  
1200 N. DuPont Highway  
Dover, DE 19901**

**NOTICE TO ALL BIDDERS**

**1.0 GENERAL NOTES**

- 1.1 Bidders are hereby notified that this Addendum shall be and hereby becomes part of their Contract Documents and shall be attached to the Project Manual for this project. All bidders shall acknowledge this addendum on the Bid Form.
- 1.2 The following items are intended to revise and clarify the drawings and Project Manual and shall be included by the Bidder in their proposal.
- 1.3 Bidders shall verify that their Sub-Bidders are in full receipt of the information contained herein.
- 1.4 CAD files will not be provided for bidding purposes. CAD files will be made available as requested to awarded Contractors.
- 1.5 A consolidated set of Contract Documents will be issued post-award. All awarded Contractors will need to purchase a complete set upon award. This cost should be included in the bid.
- 1.6 Due to a discrepancy in bid documents posted on the Delaware state web site, the bid date has been changed to **December 19, 2013 at 11 AM.**
- 1.7 Bid questions are due by December 12, 2013 at 12 PM.
- 1.8 Substitution request are due by December 12, 2013 at 12 PM.
- 1.9 Scope reviews with the winning bidder shall be held on **Friday December 20, 2013 at 10 AM.**
- 1.10 Pre-bid meeting presentation has been included in this addendum.

2.0 CHANGES TO DIVISIONS 00 & 01

- 2.1 SECTION 00400 – BID FORM – 08A GLASS, GLAZING, CURTAINWALL & SKYLIGHT  
**(REVISED)**
- 2.2 SECTION 01020 – BID PACKAGE 08A – GLASS, GLAZING AND CURTAINWALL  
**(REVISED)**
- 2.3 SECTION 01025 – PROJECT ALTERNATES **(REVISED)**

SECTION 00400 – BID FORM (REVISED ADDENDUM 5)

For Bids Due: December 19, 2013

To: Delaware State University  
1200 N. DuPont Highway  
Dover, DE 19901

Bid Package: 08A - GLASS, GLAZING, CURTAINWALL & SKYLIGHT

Name of Bidder: \_\_\_\_\_

Delaware Business License No.: \_\_\_\_\_ Taxpayer ID No.: \_\_\_\_\_

(Other License Nos.): \_\_\_\_\_

Phone No.: \_\_\_\_\_

The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

BASE BID: \$ \_\_\_\_\_ Dollars  
( \$ \_\_\_\_\_ )

ALTERNATES – See Division 01 – Section 01025 for complete description of alternates (Addendum 3 4)

Not all of the blank spaces may be required. Alternate prices are to conform to applicable project specification sections or drawing details. An “ADD” or “DEDUCT” amount is indicated by circling whichever is applicable. If an alternate does not apply to a specific bid package, insert: “Not Applicable”

**ALTERNATE NO. 12:** Provide the deduct cost for all interior aluminum door frames as specified in section 08120 and as noted as type 1 on the door schedule on a2.5 where the frame is noted to be aluminum with a wood door. **Glazing for all openings is still part of this Contractor’s scope of work. (Addendum 5)**

Add / Deduct (circle one): \_\_\_\_\_ Dollars  
( \$ \_\_\_\_\_ )

**ALTERNATE NO. 13: Provide the deduct cost to remove doors A240, A241, A340 and A341 from this Contractor's scope of work. Frames for these opening shall remain part of this Contractor's scope of work. (Addendum 5)**

Add / Deduct (circle one): \_\_\_\_\_ Dollars  
( \$ \_\_\_\_\_ )

**UNIT PRICES – See specific Scope of Work for unit pricing description:**

Unit prices conform to applicable project specification section. Refer to the specifications and/or specific scope of work for a complete description of required unit prices for this bid package. Not all of the blank spaces below may be required.

None (Addendum 3)

I/We acknowledge the receipt of addenda as listed below and the price(s) submitted include any cost/schedule impact they may have.

<b>Addendum Number</b>	<b>Date of Addendum</b>
1-4	Base Bid Package
_____	_____
_____	_____
_____	_____
_____	_____

This bid shall remain valid and cannot be withdrawn for **Sixty (60)** days from the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (REQUIRED).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Subcontractors named on the list attached to this bid.

Should I/We be awarded this contract, I/We pledge to complete all the work required in accordance with the project schedule included in specification section 01780.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation (circle one)

By \_\_\_\_\_ Trading as \_\_\_\_\_  
(Individual's / General Partner's / Corporate Name)  
\_\_\_\_\_  
(State of Corporation)

**Business Address:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Witness:** \_\_\_\_\_ **By:** \_\_\_\_\_  
(Authorized Signature)  
\_\_\_\_\_  
(Printed Name and Title)  
**Date:** \_\_\_\_\_

**ATTACHMENTS**

- Subcontractor List (See Section 00450 and any updates by addenda)
- Non-Collusion Statement
- Bid Security (Deposit or Bid Bond)

**BID FORM**

**Bid Package #:** 08A - GLASS, GLAZING, CURTAINWALL & SKYLIGHT

**SUBCONTRACTOR LIST**

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the *Owner*, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

**NOTE: Subcontractor categories specific to each bid package are listed in specification section 00450 and will be updated at the pre-bid meeting and via addendum. If no categories are requested for a bid package, then none are required to be submitted. Refer to specification section 00450 and any addenda that may modify the required listing.**

<u>Subcontractor Category</u>	<u>Subcontractor</u>	<u>Address (City &amp; State) &amp; License #</u>
_____	_____	City _____ State _____ License # _____

<u>Subcontractor Category</u>	<u>Subcontractor</u>	<u>Address (City &amp; State) &amp; License #</u>
_____	_____	City _____ State _____ License # _____

<u>Subcontractor Category</u>	<u>Subcontractor</u>	<u>Address (City &amp; State) &amp; License #</u>
_____	_____	City _____ State _____ License # _____

**BID FORM**

**NON-COLLUSION STATEMENT**

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date to the Delaware State University. (Addendum ④)

All the terms and conditions of Bid #08A - GLASS, GLAZING, CURTAINWALL & SKYLIGHT have been thoroughly examined and are understood.

**NAME OF BIDDER:** \_\_\_\_\_

**AUTHORIZED REPRESENTATIVE (TYPED):** \_\_\_\_\_

**AUTHORIZED REPRESENTATIVE (SIGNATURE):** \_\_\_\_\_

**TITLE:** \_\_\_\_\_

**ADDRESS OF BIDDER:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**PHONE NUMBER:** \_\_\_\_\_

Sworn to and Subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 2013

My Commission expires \_\_\_\_\_. NOTARY PUBLIC \_\_\_\_\_

**THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED**

END OF SECTION 00400



SECTION 01020 – BID PACKAGE 08A – GLASS, GLAZING AND CURTAINWALL (REVISED ADDENDUM **5**)

- A. The provisions outlined in the General Scope of Work shall apply to all items of this section. All work shall be in accordance with the schedule.
- B. This work shall include all labor, supervision, material, tools, equipment, shop drawings, submittals, layout, unloading, scaffolding, ladders, hoisting, transportation, taxes, permits, engineering, support functions, insurance, bonds and any other items or services necessary for and reasonably incidental to the proper execution and completion of the work, whether temporary or permanent, in accordance with all drawings, specifications, addenda, general conditions, requirements and other related documents as indicated herein. The scope of work shall include but not be limited to the following specific scope of work: (All work shall be furnished and installed unless noted otherwise herein.)

**SPECIFICATION SECTIONS**

The Contractor is fully responsible for all of the information contained in all sections of the technical specification manual as it applies to their trade. For specifications listed below as “In Its Entirety”, it is this trades full responsibility for all work included in that section. For sections listed below “As Applicable”, other units of work, as defined by the Scope, may also have some responsibility for that particular section. Bidding Requirements, Contract Requirements and Supplementary Conditions apply to all of the Individual Units of Work.

<b>SECTION</b>	<b>DESCRIPTION</b>	<b>RESPONSIBILITY</b>
DIVISION 00	CONTRACT REQUIREMENTS	IN ITS ENTIRETY
DIVISION 01	GENERAL REQUIREMENTS	IN ITS ENTIRETY
DIVISION 02	SITE CONSTRUCTION	AS APPLICABLE
DIVISION 03	CONCRETE	AS APPLICABLE
DIVISION 04	MASONRY	AS APPLICABLE
DIVISION 05	METALS	AS APPLICABLE
DIVISION 06	WOOD AND PLASTICS	AS APPLICABLE
DIVISION 07	THERMAL AND MOISTURE PROTECTION	AS APPLICABLE
07435	INSULATED METAL PANELS	IN ITS ENTIRETY
07901	JOINT SEALANTS	IN ITS ENTIRETY
DIVISION 08	DOORS AND WINDOWS	AS APPLICABLE
08120	INTERIOR ALUMINUM DOOR FRAMES	IN ITS ENTIRETY
08410	ALUMINUM ENTRANCES AND STOREFRONTS	IN ITS ENTIRETY
08450	ALL GLASS DOORS	IN ITS ENTIRETY
08625	METAL FRAMED SKYLIGHTS	IN ITS ENTIRETY
08710	BUILDERS HARDWARE	AS APPLICABLE
08800	GLAZING	IN ITS ENTIRETY
08840	PLASTIC GLAZING	IN ITS ENTIRETY
08920	CURTAINWALL	AS APPLICABLE <b>5</b>
DIVISION 09	FINISHES	AS APPLICABLE
DIVISION 10	SPECIALTIES	AS APPLICABLE
DIVISION 11	EQUIPMENT	AS APPLICABLE
DIVISION 12	FURNISHINGS	AS APPLICABLE

DIVISION 14	CONVEYING SYSTEMS	AS APPLICABLE
DIVISION 15	HEATING, VENTILATION, AIR CONDITIONING, PLUMBING	AS APPLICABLE
DIVISION 16	ELECTRICAL	AS APPLICABLE
DIVISION 17	INSTRUMENTATION AND CONTROL FOR HVAC	AS APPLICABLE
APPENDICES		IN ITS ENTIRETY

#### **GENERAL ITEMS**

1. This Contractor is to review all drawings including Structural, Architectural, Mechanical, Electrical, Plumbing and Fire Protection prior to mobilization to site to identify all items that need to be coordinated with the this scope of work.
2. It is this Contractor's responsibility to coordinate with all work trades affecting this Contractor's work to ensure proper installation of materials.
3. This Contractor is aware that they must take whatever means necessary to meet the project schedule including but not limited to overtime hours, increased manpower, shift work, etc. at no additional cost to the owner.
4. Provide all necessary mobilizations as required to complete this scope of work.

#### **GLASS, GLAZING AND CURTAINWALL SPECIFIC SCOPE ITEMS**

5. Furnish and install all aluminum framing, glass and metal wall panels complete as shown on the mockup sketch (refer to SKA-01 add02). Provide labor, materials, equipment, dumpster and complete removal of the glass and curtainwall from this mockup once approved to be removed by the Construction Manager and Architect. Glass may be re-used in the construction of the building if sized accordingly and is the approved color and finish. Provide water testing the glass and metal panels in the mockup. (Addendum ②)
6. Furnish and install complete all aluminum storefront systems, windows, interior and exterior aluminum doors and frames, interior aluminum frame window units, window trim, hardware (sensors, mag locks, closers, etc.), pulls, shims, fasteners, accessories and aluminum pieces including but not limited to angles, plates, bent plates and extrusions. Furnish and install all interior glass and glazing, channels (see detail 3/a12.1, note 14, typical), sealants, setting blocks, etc. (Addendum ②④)
7. All aluminum windows and doors are to be furnished with glazing as specified in the Contract Documents.
8. Provide all required coordination and layout required for interior and exterior aluminum windows. Coordinate with partitions and steel contractors and any other trade as required.
9. This Contractor is responsible for furnishing and installing all glass in aluminum and hollow metal door frames, hollow metal window, hollow metal doors and wood doors including glass for all doors, doorframes, borrow lite frame, butt glazed glass, etc. Including specialty glazing for types such as obscure glass.
10. Furnish and install any necessary steel angles or clips required to attach the curtain wall or storefront systems to the building steel. This shall include anything not shown on the Contract Documents but required for this work.
11. Furnish and install all flashing under windows to ensure a watertight system.
12. This Contractor is responsible for all caulking or sealants integral to the aluminum storefront and/or window systems and caulking to adjacent dissimilar materials. Provide backer rod where required. Caulking between aluminum and metal panels shall be by this Contractor. Provide

- spray foam insulation between metal panels and curtainwall (details 8 & 12/a11.7 note 30) and at skylight sloped edges (details 1 & 4/a11.7 note 30) (Addendum ③)
13. Provide all pre-finished aluminum materials as specified.
  14. Window opening sizes will need to be closely coordinated with the general trades contractor. This Contractor will be required to provide the necessary layout and rough opening dimensions prior to work starting by the other trades. The general trades contractor will build the openings based on "hold-to" dimensions provided by this Contractor. No time will be allowed for field measuring openings prior to constructing the windows. (Addendum ②)
  15. Furnish and install all aluminum drip edges as indicated or specified.
  16. Furnish and install all aluminum stop beads, jamb extensions, sills, stools, in frame insulation, weather stripping, etc. as required to provide a complete and weatherproof window installation.
  17. Furnish and install the aluminum finish trim for all systems furnished under this package.
  18. Furnish and install all shims, fasteners and clips associated with the new windows to provide a complete and uniform installation of all window units.
  19. All wood nailers, window and door blocking will be the responsibility of the general trades contractor. This Contractor is responsible for verifying that all required blocking for this packed has been installed. (Addendum ②)
  20. Provide and pay for all hoisting, rigging, scaffolding, shoring, equipment, etc. required to accomplish the work described herein.
  21. This Contractor is responsible for all fall protection and safety requirements associated with this work. When working from either lifts and harnesses or tie-offs provided by this Contractor, OSHA standards must be met and followed at all times.
  22. Furnish and install all aluminum entrance doors (interior and exterior), including support structure and any integral aluminum wall panel systems.
  23. Provide and install all door hardware that is to be installed on the aluminum doors and frames as per the door hardware specifications.
  24. Furnish and install all interior and exterior automatic door operators, aluminum bollards, push pads, access panels, etc. Coordinate the installation of the automatic door openings with the electrical contractor to ensure a properly functioning product. This Contractor shall provide the power connection location and all electrical and control wiring beyond the main power supply. Provide access for the electrical contractor to install conduit and wiring to the appropriate location which shall be specifically designated on the shop drawings. See detail 1/a6.2, note 39; a8.0, note 12; details 2/a8.2, note 16; 7/a10.0. (Addendum ②)
  25. Provide all testing, balancing and commissioning of automatic doors at time of installation. This Contractor shall include an additional adjustment after all HVAC systems have been tested and balanced to ensure all doors are operating properly.
  26. Furnish and install glass backsplash at all locations where indicated. See detail 1/a16.0, note 9, typical. Coordinate with 06A Finish Carpentry contractor as required. (Addendum ②)
  27. Provide any supplemental framing that is required to properly support the work described herein but not shown on the Contract Documents or specifically assigned to another contractor.
  28. Include the necessary multiple mobilizations to the jobsite to facilitate the work per the project schedule.
  29. Furnish and pay for all engineering, testing, calculations, certifications, site visits by manufacturer representatives, etc. if required by the Contract Documents. All engineering and calculations shall be stamped by a professional engineer licensed in the State of Delaware.
  30. Coordinate with and make provisions for a security system to be installed by others such as but not limited to reinforcement, raceways, cutouts, etc.

31. Provide protection of own work during installation. After completion of each area, review the area with the CM to ensure area has no damage, sub-standard installations, etc. This is not the official punchlist. Prior to leaving an area of work, the metal frames and glazing shall be cleaned by this Contractor. Provide final clean-up of each work area. Install temporary protection on ALL window sills following installation. Protection to consist of 1/8" corrugated plastic held with painters tape to protect factory finish. (Addendum ②)
32. Protect adjacent work from damage by this Contractor.
33. Water test windows as required by the Contract Documents.
34. Furnish and install the skylight in its entirety. This work shall include but not be limited to all flashings (details 1 & 3/a11.7 note 12, typical), counter-flashings, drip edges, anchors, sealants, etc. Coordinate with roofing and carpentry contractors for blocking and flashing details at the curb of the skylight. Provide a water test as required by the Contract Documents. (Addendum ②③)
35. ~~Furnish and install all metal insulated panels in the curtainwall system and all insulated and non-insulated metal panels at penthouse and roof screen wall. This Contractor shall own the entire scope of work under Bid Package 07B Metal Panels complete. Refer to details 8 and 12 on a/11.7 (fully glazed system).~~ (Addendum ②④)
36. Furnish and install aluminum plate panel as indicated on SKA-02 add01, note 41. (Addendum ②)
37. Assume one full height section of curtainwall ~~or metal panel~~ to be left out for trash chute and/or material access. Assume remobilization at a later date to complete final installation (anchored/caulked/etc.) at the direction of the CM. (Addendum ②⑤)
38. Provide a competent individual to walk the project at the end of every day while this Contractor is on site. If a life safety issue is discovered, this Contractor must take all required measures to bring the condition to a safe state prior to leaving the site on a daily basis. (Addendum ③)
39. This Contractor shall provide the caulk joints at the jambs of the metal panels as shown in details 7 and 11/a11.7. The metal panels shall be furnished and installed by the Metal Panels Contractor. (Addendum ④)

#### **BIM/VDC REQUIREMENTS**

40. This Contractor shall model in 3D, the curtainwall, glass and metal panels for coordination with all MEP, structure, laboratory and architectural trades. This model will be delivered to the CM in accordance with the VDC Execution Plan in Division 01 – Section 01315.
41. Provide an onsite modeler a minimum of two (2) days per week to model this Contractor's work. Model must be complete within six (6) weeks from award of this Contract. Please note the modeler onsite is to help bring coordination with other trades to an expeditious conclusion. This Contractor is still responsible to include whatever it takes to complete a fully coordinated model.
42. This Contractor shall be responsible for modeling of all curtainwall, glass, aluminum/glass doors and metal panels as well as all contents included in this scope of work. Modeled contents shall include but not be limited to:
  - a. Curtainwall members and glass
  - b. Insulated and non-insulated metal wall panels
  - c. Aluminum doors
  - d. Glass and glazing
  - e. Clips, brackets, support members, accessories, raceways for automatic doors

### **ALTERNATES**

See Division 01 – Section 01025 for list of alternates that may or may not apply to this scope of work.

~~Alternate No. 9: Provide the deduct for all work as described in Bid Package 07B. If Alternates #8 and #9 are accepted, the Contractor awarded Bid Package 07B will install the metal panel system, but this Contractor shall still provide the caulk joints at the jambs of the metal panels as shown in details 7 and 11/a11.7. (Addendum ②④)~~

Alternate No. 12: Provide the deduct cost for all interior aluminum door frames as specified in section 08120 and as noted as type 1 on the door schedule on a2.5 where the frame is noted to be aluminum with a wood door. **Glazing for all openings is still part of this Contractor's scope of work. (Addendum ⑤)**

**Alternate No. 13: Provide the deduct cost to remove doors A240, A241, A340 and A341 from this Contractor's scope of work. Frames for these opening shall remain part of this Contractor's scope of work. (Addendum ⑤)**

### **ALLOWANCES**

Add to the base bid price, the following ALLOWANCES. Overhead and profit should not be included on top of these allowances in the base bid cost. They will be billed against on a time and material basis during the project with labor rates and unit prices that will include the allowable overhead and profit. Any unused portion will be credited from the Contract. Any monies spent against these allowances are to be approved by WT via signed extra work tickets. The allowances can be used for another purpose at the discretion of the CM at any time:

1. Allowance #1 – Include in the bid a lump sum of \$7,500 for the purpose of temporary protection above and beyond what is stated in this scope of work to be used at the direction of the CM. To be paid for T&M using unit prices. (Addendum ②)

END OF SECTION 01020

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SECTION 01025 – PROJECT ALTERNATES (REVISED ADDENDUM 5)

Insert the following alternate prices into the spaces provided on the bid form.

**ALTERNATE No. 1:** This Alternate applies to Bid Packages 06A, 09A, 09E, 12A, 15A and 16A. Fit up of Lab #238 (Khan) as shown on the drawings. (Addendum ② ③)  
Base bid shall consist of the following:

- Gypsum board walls
- Door and hardware as scheduled
- Lay-in ceiling as specified
- Epoxy floor and wall base as specified
- Purchase light fixtures and install minimum required for life safety (others to be stored)
- No raceway; minimum power (wall outlets) as required by code
- Rough-in for door access control
- Stub in lab piping above ceiling and cap inside lab
- Rough-in only for safety shower/floor drain/sink
- Stub in lab plumbing and HVAC piping above ceiling and cap inside lab
- Provide chilled beams for future installation (stored by owner)
- No building automation controls required
- No data rough-in required

**ALTERNATE No. 2:** This Alternate applies to Bid Packages 06A, 09A, 09D and 15A. Casework and sink at lounge #318 as shown on the drawings. (Addendum ②)  
Base bid shall consist of the following:

- No casework
- Painted gypsum wall board
- Rough-in only for sink supply and waste

**ALTERNATE No. 3:** This Alternate applies to Bid Packages 06A, 09A and 09D. Casework at copy alcove at ground floor (Hallway A120) and copy alcove (A217) as shown on the drawings. (Addendum ②)

Base bid shall consist of the following:

- No casework
- Painted gypsum wall board

**ALTERNATE No. 4:** This Alternate only applies to Bid Package 15A. Free cooling module for chiller (as specified). See Mechanical drawings. (Addendum ②)  
Base bid shall consist of the chiller without the free cooling module.

**ALTERNATE No. 5:** This Alternate only applies to Bid Package 15A. Separate HVAC controls for each office as shown on the Mechanical drawings. (Addendum ②)  
Base bid shall consist of the following:

- Pipe and control groups of two (2) offices as one (1) control zone.
- One thermostat, one hot water control valve and one chilled beam water control valve per two (2) offices on levels 1 thru 3.

**ALTERNATE No. 6:** This Alternate only applies to Bid Package 02A. Furnish a temporary SWM pond away from the building pad to allow for general construction activities. See logistics plan provided by the Construction Manager for location. Provide all labor and material to relocate the SWM pond to the permanent location according to the schedule and survey the new SWM pond as soon as it is complete. Expedite this survey as it is a critical path activity. (Addendum ②)

**ALTERNATE No. 7:** This Alternate only applies to Bid Package 02A. Furnish a stabilized construction road over the area delineated by the permanent SWM pond to allow for construction vehicle and lift access close to the south west side of the building. Remove and restore all grades, surfaces and the SWM pond after exterior construction on this side of the building is complete. Maintain full functionality of the SWM pond during this entire period. (Addendum ②)

**ALTERNATE No. 8:** This Alternate only applies to Bid Package 07B. Provide an insulated metal panel system complete. Panels are to be mounted in the curtainwall system and fully caulked. Coordinate with the glass and curtainwall contractor as required to ensure all details are accepted by the manufacturer of the metal panel system and that systems maintain the integrity of the building envelope and provide for adequate water drainage. Maintain all warranties as required by the Contract Documents. This is a caulked system as shown in details 7 and 11/a11.7, but caulking of the panel jambs shall be provided by the Contractor who is awarded Bid Package 08B. (Addendum ②)

**ALTERNATE No. 9:** This Alternate only applies to Bid Package 08A. Provide the deduct cost for all work associated with Bid Package 07B. This shall be based on the fully glazed system as shown in details 8 and 12/a11.7. Should this Alternate be accepted, the Contractor who is awarded Bid Package 08B shall still be required to furnish and install the caulk at the jambs of the panels as described in Alternate No. 8. (Addendum ②)

**ALTERNATE No. 10:** This Alternate only applies to Bid Package 15A. Provide the cost for the CM (assume 2 people from Delaware), the Owner (assume 2 people from Delaware), the architect (assume 1 person from Phoenix, Arizona), Cx Agent (assume 1 person from New Jersey) and engineer (assume 1 person from Philadelphia) for factory witness testing of the air handling unit. This will include travel, lodging and meals. Four (4) weeks' notice will be required. The cost for the each party shall include travel from their home office to the factory where the air handler is being assembled and/or tested. (Addendum ②)

**ALTERNATE No. 11:** This Alternate only applies to Bid Package 02A. Provide the cost to furnish, install and remove asphalt millings for the Laydown Area as shown on the logistics plan. Include 14,250 SF (1,585 SY). Scope shall include proof rolling after removal of top soil, filter fabric and 4" (four inches) of compacted asphalt millings. Note that removal of top soil is part of the base bid of Bid Package 02A. Removal shall occur just prior to final landscaping is to start. (Addendum ③)



**ALTERNATE No. 12:** Provide the deduct cost for all interior aluminum door frames as specified in section 08120 and as noted as type 1 on the door schedule on a2.5 where the frame is noted to be aluminum with a wood door. (Addendum ④)

**ALTERNATE No. 13:** Provide the deduct cost to remove doors A240, A241, A340 and A341 from this Contractor's scope of work. Frames for these opening shall remain part of this Contractor's scope of work. (Addendum ⑤)

END OF SECTION 01025

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**Addendum Number: 05**

**Delaware State University**  
**Optical Sciences Center for Applied Research**  
Date: December 11, 2013

The following revisions and clarifications to the plans and specifications shall become part of the above referenced contract documents.

**GENERAL:**

**ATTACHMENTS:**

**Project Information: None**

**Specifications:**

**08411- flush aluminum doors**

**Drawings:**

New Sheets: **None**

Re-issued sheets: **None**

Sketches:

- **Civil:** None
- **Landscape:** None
- **Architectural:** None
- **Structural:** None
- **Mechanical:** None
- **Plumbing:** None
- **Electrical:** None

**Cut Sheets: None**

**PRIOR APPROVALS:**

**Approved:**

1. **08920 Glazed aluminum curtain wall**  
**EFCO 5600 2.5" X 7.25" outside glazed** in lieu of specified aluminum curtainwall system

The substitution is approved with the following stipulations/ assumptions:

- a. The proposed system will be installed per the design intent as shown in the construction documents including but not limited to, mullion profile depth, mullion spacing, glass unit size as shown and locations of horizontal mullion, connection details, etc...
- b. 7.25" overall mullion depth is used throughout as detailed in conjunction with adjacent metal panels

- c. Vertical span of system is to be achieved with the mullion profile only with the addition on internal steel reinforcing as necessary. No additional horizontal mullions, varying of the mullion spacing, or increasing of mullion depth is permitted.
- d. Glass is to be provided per manf. and type specified. Approval of this substitution for curtain wall system does not permit substitution of specified glazing unless submitted separately and approved by the architect during the bidding period.
- e. curtain wall system is to include door frames/openings for exit stairwell doors A116a and A132a as detailed. See also revision to door type 5 in addendum 01.

**2. 08410 Aluminum entrances and storefront**

**EFCO 5600 2" aluminum curtain wall** in lieu of specified aluminum storefront system at lobby

The substitution is approved with the following stipulations/ assumptions:

- a. The proposed system will be installed per the design intent as shown in the construction documents (including but not limited to , mullion profile depth, mullion spacing, glass thickness as specified)
- b. Vertical span is to be achieved with the profile only with the addition on internal steel reinforcing as necessary. No additional horizontal mullions or varying of the mullion spacing is permitted.
- c. Appropriate adaptors will be provided to execute the monolithic glazed corner detail per 4/a11.5.
- d. All exterior and interior flush aluminum doors (types C and D) for per door schedule are to be provided—per attached specification section- or approved equal.
- e. 5600 curtain wall system (ilo storefront system) is to include door frames/openings for doors A120 and A131.

**3. 08625 Glass skylights**

**Imperial Glass Structure Co. – custom skylight framing system** in lieu of specified aluminum skylight system

The substitution is approved with the following stipulations/ assumptions:

- a. The proposed system will be installed per the design intent as shown in the construction documents, including but not limited to, rafter/purling spacing/ configuration, inclusion of "false" diagonals, and perimeter detailing).
- b. Modification of the configuration for the provided structural steel framing supporting the skylight or the incorporation of additional structural elements will not be permitted.

**Rejected**

**1. 08410 Aluminum entrances and storefront**

**EFCO series 406 2"x 6 ½" aluminum storefront system** in lieu of specified aluminum storefront system door frames.

The design intent is to utilize the same system provided for the lobby exterior walls for the frames of interior doors A101, A102a, and A103a. The proposed 5600 2" x 6" curtain wall system proposed for the lobby walls should be used for these interior door frames.

**Approval pending: None**

**Rejected: None**

**REVISIONS / CLARIFICATIONS- Addendum 05**

**Specifications – New:**

**Add specification section 08411 attached for flush aluminum doors**

**Specifications – Revised: None**

**Drawings:**

**CIVIL**

**LANDSCAPE**

**ARCHITECTURAL**

**None**

**STRUCTURAL**

**None**

**MECHANICAL**

**None**

**PLUMBING**

**None**

**ELECTRICAL**

**None**

**FIRE PROTECTION**

**None**

**QUESTIONS FROM BIDDERS**

**None**

**End of Addendum Number: 05**

## **SECTION 08411 ALUMINUM FLUSH DOORS**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Aluminum flush doors.

#### **1.2 RELATED SECTIONS**

- A. Section 08410 – Aluminum Entrances and Storefront
- B. Section 08710 – Builders Hardware.

#### **1.3 REFERENCES**

- A. ASTM B 209 - Aluminum and Aluminum-Alloy Sheet and Plate.
- B. ASTM B 221 - Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tube.
- C. ASTM D 1621 - Compressive Properties of Rigid Cellular Plastics.
- D. ASTM D 1623 - Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics.
- E. ASTM D 2126 - Response of Rigid Cellular Plastics to Thermal and Humid Aging.
- F. ASTM D 6670-01 - Standard Practice for Full-Scale Chamber Determination of Volatile Organic Emissions from Indoor Materials/Products
- G. ASTM E 283 - Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
- H. ASTM E 330 - Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

#### **1.4 PERFORMANCE REQUIREMENTS**

- A. General: Provide door assemblies that have been designed and fabricated to comply with specified performance requirements, as demonstrated by testing manufacturer's corresponding standard systems.
- B. Air Infiltration: For a single door, test specimen shall be tested in accordance with ASTM E 283 at pressure differential of 6.27 psf. Door shall not exceed 0.18 cfm per square foot.
- C. Uniform Structural Load: For a single door, test specimen shall be tested in accordance with ASTM E 330: Plus or minus 240 pounds per square foot.
- D. Indoor air quality testing per ASTM D 6670-01: GREENGUARD Environmental Institute Certified including GREENGUARD for Children and Schools Certification.
- E. Compressive Strength, Foam Core, Nominal Value, ASTM D 1621: 79.9 psi.
- F. Compressive Modulus, Foam Core, Nominal Value, ASTM D 1621: 370 psi.

- G. Tensile Adhesion, Foam Core, Nominal Value, ASTM D 1623: 45.3 psi.
- H. Thermal and Humid Aging, Nominal Value, 158 Degrees F and 100 Percent Humidity for 14 Days, ASTM D 2126: Minus 5.14 percent volume change.

### **1.5 SUBMITTALS**

- A. Comply with Section 01300 - Submittal Procedures.
- B. Product Data: Submit manufacturer's product data, including description of materials, components, fabrication, finishes, and installation.
- C. Shop Drawings: Submit manufacturer's shop drawings, including elevations, sections, and details, indicating dimensions, tolerances, materials, fabrication, doors, panels, framing, hardware schedule, finish, options, and accessories.
- D. Samples:
  - 1. Door: Submit manufacturer's sample of door showing face sheets, core, and finish,
- E. Test Reports: Submit certified test reports from qualified independent testing agency indicating doors comply with specified performance requirements.
- F. Maintenance Manual: Submit manufacturer's maintenance and cleaning instructions for doors, including maintenance and operating instructions for hardware.
- G. Warranty: Submit manufacturer's standard warranty.

### **1.6 QUALITY ASSURANCE**

- A. Manufacturer's Qualifications:
  - 1. Continuously engaged in manufacturing of doors of similar type to that specified, with a minimum of 10 years successful experience.

### **1.7 DELIVERY, STORAGE, AND HANDLING**

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying opening door mark and manufacturer.
- B. Storage: Store materials in clean, dry area indoors in accordance with manufacturer's instructions.
- C. Handling: Protect materials and finish from damage during handling and installation.

### **1.8 WARRANTY**

- A. Warrant doors, frames, and factory hardware against failure in materials and workmanship, including excessive deflection, faulty operation, defects in hardware installation, and deterioration of finish or construction in excess of normal weathering.
- B. Warranty Period: Ten years starting on date of shipment. In addition, a limited lifetime (while the door is in its specified application in its original installation) warranty covering: failure of

corner joinery, core deterioration, delamination or bubbling of door skin.

## **PART 2 PRODUCTS**

### **2.1 MANUFACTURER**

- A. Special-Lite, Inc.
- B. Kawneer Company, Inc.

### **2.2 ALUMINUM FLUSH DOORS**

- A. Model: SL-16 aluminum flush door, Special Lite.  
or
- B. Model: Flushline aluminum flush door, Kawneer.
  
- B. Door Opening Size: As indicated on the Drawings.
  
- C. Construction:
  - 1. Door Thickness: 1-3/4 inches.
  - 2. Stiles and Rails: Aluminum extrusions made from prime-equivalent billet that is produced from 100% reprocessed 6063-T6 alloy recovered from industrial processes, minimum of 2-5/16-inch depth.
  - 3. Corners: Mitered.
  - 4. Provide joinery of 3/8-inch diameter full-width tie rods through extruded splines top and bottom integral to standard tubular shaped stiles and rails reinforced to accept hardware as specified.
  - 5. Securing Internal Door Extrusions: 3/16-inch angle blocks and locking hex nuts for joinery. Welds, glue, or other methods are not acceptable.
  - 6. Furnish extruded stiles and rails with integral reglets to accept face sheets. Lock face sheets into place to permit flush appearance.
  - 7. Rail caps or other face sheet capture methods are not acceptable.
  - 8. Extrude top and bottom rail legs for interlocking continuous weather bar.
  - 9. Stiles: Pile brush weatherseals. Extrude stile to include integral pocket to accept pile brush weatherseals.
  - 10. Bottom of Door: Install bottom weather bar with nylon brush weatherstripping into extruded interlocking edge of bottom rail.
  - 11. Glue: Use of glue to bond sheet to core or extrusions is not acceptable
  
- D. Face Sheet:
  - 1. Material: 0.062-inch thick aluminum.
  - 2. Texture: Smooth.
  
- E. Core:
  - 1. Material: Poured-in-place polyurethane foam.
  - 2. Density: Minimum of 5 pounds per cubic foot.
  - 3. R-Value: Minimum of 9.
  
- F. Hardware:
  - 1. Premachine doors in accordance with templates from specified hardware manufacturers



and hardware schedule.

## **2.3 MATERIALS**

- A. Aluminum Members:
  - 1. Aluminum extrusions made from prime-equivalent billet that is produced from 100% reprocessed 6063-T6 alloy recovered from industrial processes: ASTM B 221.
  - 2. Sheet and Plate: ASTM B 209.
  - 3. Alloy and Temper: As required by manufacturer for strength, corrosion resistance, application of required finish, and control of color.
- B. Fasteners:
  - 1. Material: Aluminum, 18-8 stainless steel, or other non-corrosive metal.
  - 2. Compatibility: Compatible with items to be fastened.
  - 3. Exposed Fasteners: Screws with finish matching items to be fastened.

## **2.4 FABRICATION**

- A. Sizes and Profiles: Required sizes for door units, and profile requirements shall be as indicated on the Drawings.
- B. Coordination of Fabrication: Field measure before fabrication and show recorded measurements on shop drawings.
- C. Assembly:
  - 1. Complete cutting, fitting, forming, drilling, and grinding of metal before assembly.
  - 2. Remove burrs from cut edges.
- D. Fit:
  - 1. Maintain continuity of line and accurate relation of planes and angles.
  - 2. Secure attachments and support at mechanical joints with hairline fit at contacting members.

## **2.5 ALUMINUM DOOR FRAMING SYSTEMS**

- A. See Section 08410 Aluminum Entrances and Storefronts

## **2.6 HARDWARE**

- A. Premachine doors in accordance with templates from specified hardware manufacturers and hardware schedule.
- B. Hardware Schedule: As specified in Section 08710.

## **2.7 ALUMINUM FINISHES**

- A. Anodized Finish: Class I finish, 0.7 mils thick.
  - 1. Clear 215 R1, AA-M10C12C22A41, Class I, 0.7 mils thick.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Examine areas to receive doors. Notify Architect of conditions that would adversely affect installation or subsequent use. Do not proceed with installation until unsatisfactory conditions are corrected.

### **3.2 PREPARATION**

- A. Ensure openings to receive frames are plumb, level, square, and in tolerance.

### **3.3 INSTALLATION**

- A. Install doors in accordance with manufacturer's instructions.
- B. Install doors plumb, level, square, true to line, and without warp or rack.
- C. Separate aluminum from other metal surfaces with bituminous coatings or other means approved by Architect.
- E. Set thresholds in bed of mastic and backseal.
- F. Install exterior doors to be weathertight in closed position.
- G. Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Architect.
- H. Remove and replace damaged components that cannot be successfully repaired as determined by Architect.

### **3.4 ADJUSTING**

- A. Adjust doors, hinges, and locksets for smooth operation without binding.

### **3.5 CLEANING**

- A. Clean doors promptly after installation in accordance with manufacturer's instructions.
- B. Do not use harsh cleaning materials or methods that would damage finish.

### **3.7 PROTECTION**

- A. Protect installed doors to ensure that, except for normal weathering, doors will be without damage or deterioration at time of substantial completion.

**END OF SECTION**